

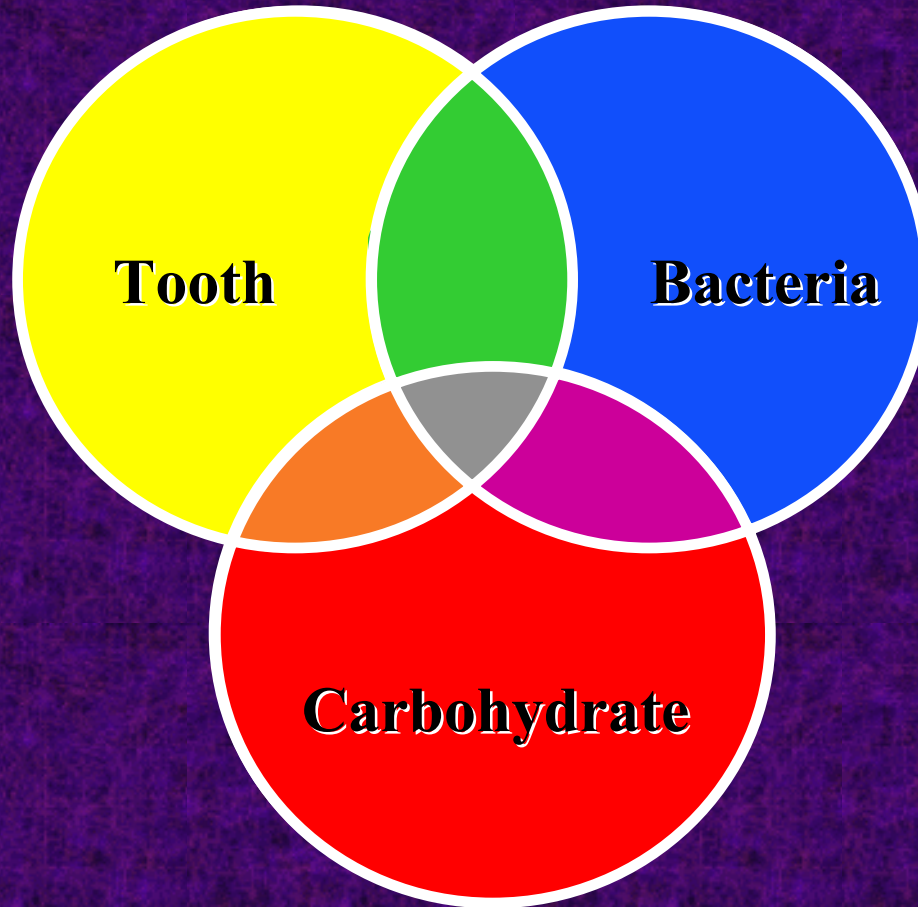
Caries Prevention for the Pregnant Patient

Michael Kanellis, DDS, MS

Department of Pediatric Dentistry



Etiology of Tooth Decay



Research Findings: Mutans streptococci and Dental Caries

- SM are detectable in infants' mouths only after primary tooth eruption
- Source of the infection appears to be mothers' saliva
- Mothers with high concentrations of SM tend to have highly infected children
- Mothers with low levels of SM have children with below-threshold levels
- Children whose mothers have high levels of SM run a greater risk of being infected at a young age and of developing a large number of carious lesions

- Goal – interfere with transmission of SM from mother to child by lowering salivary SM level in mothers
- Preventive regimens used to achieve this goal are relatively complex
 - Topical application of CHX and F
 - Dietary counseling
 - Use of sealants
 - Preparation and filling of large cavities
 - Professional prophylaxis
 - Oral hygiene education sessions

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Purpose

- evaluate whether reduction of SM levels in highly infected women via a minimal preventive regiment during pregnancy could influence mother-to-child transmission.

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Materials and Methods

- OB/Gyn Department in Milan, Italy (1993)
- Women in last week of third month of pregnancy were screened for SM levels
- 310 women were evaluated
- 65 had SM levels $>10^5$ CFU/ml
- Randomly assigned to experimental (n=33) or control (n=32) group

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Experimental Group Treatment

- Dietary counseling
- One session of professional prophylaxis and OH instruction (ultrasonic scaling and polishing with rubber cup)
- Systemic fluoride (1 mg F⁻/day)
- Daily use of F⁻ mouthrinse (0.05%)
- Daily use of CHX mouthrinse (0.12 %)

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0.05% topical fluoride



0.12% chlorhexidine rinse



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Experimental Group Treatment

- Subjects were asked to rinse with fluoride and then CHX in the evening, in 3 cycles of 20 days each, with two 10-day rinse-free intervals
- Rinse-free cycles were to limit side effects of prolonged CHX treatment
- Began tx at end of 6th month of pregnancy and continued until delivery

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Side Effects of Prolonged CHX Treatment

- increase in staining of teeth
- increase in calculus formation
- alteration in taste perception
- oral irritation and local allergy-type symptoms have been reported

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Control Group Treatment

- Dietary counseling
- One session of professional prophylaxis and OH instruction (ultrasonic scaling and polishing with rubber cup)
- Systemic fluoride (1 mg F⁻/day)
- NO daily fluoride mouthrinse
- NO daily CHX mouthrinse

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Materials and Methods

- Mothers' saliva sampled at mos. 3, 6, 9 of pregnancy, and 6, 12, 18 and 24 mos. following delivery
- Child's saliva was sampled at ages 6, 12, 18 and 24 months
- A child's saliva was considered to have permanent colonization if SM levels were higher than 1×10^3 CFU/mL

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Results

- 65 mother-child couples at baseline
- 60 completed the study
- None of the subjects received restorative or preventive treatment other than what was received in study

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Results

- None of the subjects experienced adverse effects
- The CHX / F treatment regimen significantly reduced SM levels in mothers (X6)
- Significant difference in SM levels between groups beginning at the end of the 3 month of the treatment regimen, and continuing to the end of the study

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Results

- Fewer children in the experimental group were infected with SM than in the control group
- Mean age at which colonization occurred:
Experimental group = 22.53 months
Control group = 18.20 months

Caries Prevention During Pregnancy: Results of a 30-Month Study. Brambilla et al. JADA 129:871-7, 1998.

Discussion

- Advantage of treatment regimen = general acceptance by subjects; low cost; easily performed at home
- “This preventive intervention was highly effective, particularly from a cost/benefit perspective”

Daily F- mouthrinse vs. 5000 ppm F toothpaste

- 0.05% daily F- mouthrinse has less fluoride than a prescription toothpaste (PreviDent 5000) and compliance may be more difficult



Systemic Fluoride Supplements

- No evidence to support prenatal benefit
- Benefit to mother is primarily topical

Dr. Kanellis'
Recommendations for Pregnant Women
Enrolled in Early Head Start

1. Professional cleaning at dental office (at enrollment)
2. OH instruction (dental office + EHS)
3. Dietary counseling (dental office + EHS)
4. Daily CHX mouthrinse with Peridex (3 cycles of 20 days, with 10 days off between)
5. Toothbrushing 2X daily with PreviDent 5000 toothpaste

Unanswered Questions

1. Does Medicaid pay for the recommended prescriptions?
2. Who will prescribe the PreviDent toothpaste and the CHX mouth rinse?
3. How important is it to have teeth restored?

Thank You!



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